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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,225

02/17/2004

Kenji Kuwabara

P/1905-108

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EXAMINER

TECKLU, ISAAC TUKU

ART UNIT

PAPER NUMBER

2192

MAIL DATE

DELIVERY MODE

11/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/780,225	Applicant(s) KUWABARA ET AL.	
	Examiner ISAAC T. TECKLU	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-6, 8-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2, 4-6, 8-11 and 13-15 are pending and have been reexamined.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/21/2008 has been entered.

Response to Arguments

3. Applicant's arguments filed 08/21/2008 have been fully considered but they are not persuasive. Further, Amendments to claims 1, 2 and 5 have been considered and are addressed in view of the new ground(s) of rejection. See Berkovich et al. (US 5,619,680), art made of record.
4. Applicant argues **Martin** does not disclose exception processing during runtime of the executable form program and a refer request to variables arranged on a memory space managed by another processor.

In view of the above rejections, **Martin** is shown to demonstrate "exception processing" of refer requests (*column 10, lines 30-49, "concurrent accesses to data"*), by multiple sources or

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memory spaces acting as a single memory space (*column 9, lines 26-33, "same memory space"; column 2, lines 14-38, "distributed processing on a plurality of host computers"*). This occurs as the program (produced by the compiler) executes (runtime). The plain language of the amended claim merely calls for detecting an occurrence of refer request. The broadest reasonable interpretation of the claim language reveals "exception processing" does not sufficiently define anything except as viewed by the entire limitation of which it is a part. Therefore, "exception processing" is accomplished because the cited reference discloses "by detecting an occurrence of a refer request, to variables arranged on a memory space managed by another processor during running of the executable form program" (as previously indicated). The cited reference, Martin, clearly demonstrates detecting an occurrence of refer request as "distributed processing" (*column 9, lines 26-33; column 10, lines 30-49 and column 2, lines 14-38*), that is to say processing by multiple processors and memories and thus memory spaces of other processors. Therefore, the rejections are maintained.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-2, 4-6, 8-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 6,438,746 B1) in view of Berkovich et al. (US 5,619,680)..

Claim 1 (Currently Amended)

Martin disclosed a method of converting a software program comprising object files for a single processor to a software program for a multiprocessor comprising at least two processors, comprising the steps of:

preparing an executable form program for each processor of the at least two processors so that at a time of program execution each executable form program is running on a single memory space by an operating system software running on a single memory space on the multiprocessor ~~for each processor~~ (*column 1, lines 55-62; and column 2, lines 14-38*)

exception processing for a refer requestor processor of the at least two processors, by detecting an occurrence of a refer request to variables arranged on a memory space managed by another processor during running of the executable form program (*column 9, lines 26-33, "same memory space"; column 10, lines 30-49, "concurrent accesses to data"; column 2, lines 14-38, "distributed processing on a plurality of host computers"*)

sending the refer request to a requested processor of the at least two processors (*column 9, lines 26-33; column 10, lines 30-49, "concurrent accesses to data"*);

returning refer results, by the requested processor referring to the variables, to the refer requester processor (*column 9, lines 26-33, "same memory space"; column 10, lines 30-49*), and

emulation-executing by the refer requester processor a variable refer command from the returned results to return to the next command from the exception processing (*column 9, lines 26-33; column 10, lines 30-49*).

Martin substantially disclosed the invention as claimed above. However, Martin does not explicitly disclose “allocating ~~a source file compiled from the software program~~ each of the object files to ~~each processor~~ at least one of the at least two processors by an object file unit so that the object files are divided into the same number of groups as the number of the at least two processors”. Nevertheless, as evidenced by the teaching of Berkovich, it was known to allocate each of the object files to at least one of the at least two processors by an object file unit so that the object files are divided into the same number of groups as the number of the at least two processors” (see Berkovich col.3:1-40). Thus, it is respectfully submitted that it would have been obvious to one skilled in the art at the time the invention was made to allocate each of the object files to at least one of the at least two processors by an object file unit so that the object files are divided into the same number of groups as the number of the at least two processors” (see Berkovich col.3:1-40).

Claim 2 (Currently Amended)

Martin disclosed the method of converting the software program for the single processor to the software program for the multiprocessor according to claim 1, further comprising ~~the step of:~~

disposing the execute form program mounted on the memory space to be managed by each processor of the at least two processors in such a manner that addresses are prevented from being duplicated among the processors and (*column 9, lines 13-16*).

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communication between the processors of the at least two processors in which communication including processing request transmission and processing result return via the exception processing occurs (column 11, lines 40-41).

Claim 4

Martin disclosed the method of converting the software program for the single processor to the software program for the multiprocessor according to claim 1 or 2, wherein the refer request is a write request for writing into the variables (*column 9, lines 26-33; column 10, lines 30-49*).

Claim 5(Currently Amended)

Martin disclosed the method of converting the software program for the single processor to the software program for the multiprocessor according to claim 4, wherein the requested processor returns as write results the returned refer results to the refer ~~request~~ requester processor (*column 9, lines 26-33; column 10, lines 30-49*).

Claim 6

Martin disclosed the method of converting the software program for the single processor to the software program for the multiprocessor according to claim 1 or 2, wherein the refer request is a call request for functions arranged on the memory space managed by the other processor, and the refer requester processor emulation-executes a function call command from the returned refer results (*column 9, lines 26-33; column 10, lines 30-49; column 7, lines 12-26, "call" object*).

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Claim 8

Martin disclosed a cellular phone in which the software program for the multiprocessor converted by the method according to claim 1 is installed (*column 3, line 42*).

Claim 9

Martin disclosed the method of converting the software program for the single processor to the software program for the multiprocessor according to claim 4, further comprising:
communication between the processors in which communication including processing request transmission and processing result return via the exception processing is possible (*column 11, lines 40-41*).

Claim 10

Martin disclosed the method of converting the software program for the single processor to the software program for the multiprocessor according to claim 5, further comprising:
communication between the processors in which communication including processing request transmission and processing result return via the exception processing occurs (*column 11, lines 40-41*).

Claims 11 and 13-15

Martin disclosed a cellular phone in which the software program for the multiprocessor converted by the method according to claim 2 is installed (*column 3, line 42*).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ISAAC T. TECKLU whose telephone number is (571)272-7957. The examiner can normally be reached on M-TH 9:300A - 8:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Isaac T Tecklu/
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192